

Appl. No. : 09/868,737
Filed : October 15, 2001

AMENDMENTS TO DRAWING FIGURES

As stated below, Applicants have requested to amend Figs. 1, 3, and 4 to correct clerical errors, as shown in the attached copy of the figures wherein the corrections are indicated with red ink. That is, the term "fullerences" has been corrected to "fullerenes" in the figures.

REQUEST FOR APPROVAL OF DRAWING CHANGES

The amendment requested herein is to correct clerical errors of Figs. 1, 3, and 4 as shown with red ink in the attached copy of the figures. That is, the term "fullerenes" was misspelled as "fullerences" in the figures. No new matter has been added. Approval of this amendment is respectfully requested.



WATER CONTAINING FULLERENES AND METHOD FOR
PRODUCING THE SAME

HIRATA, et al.

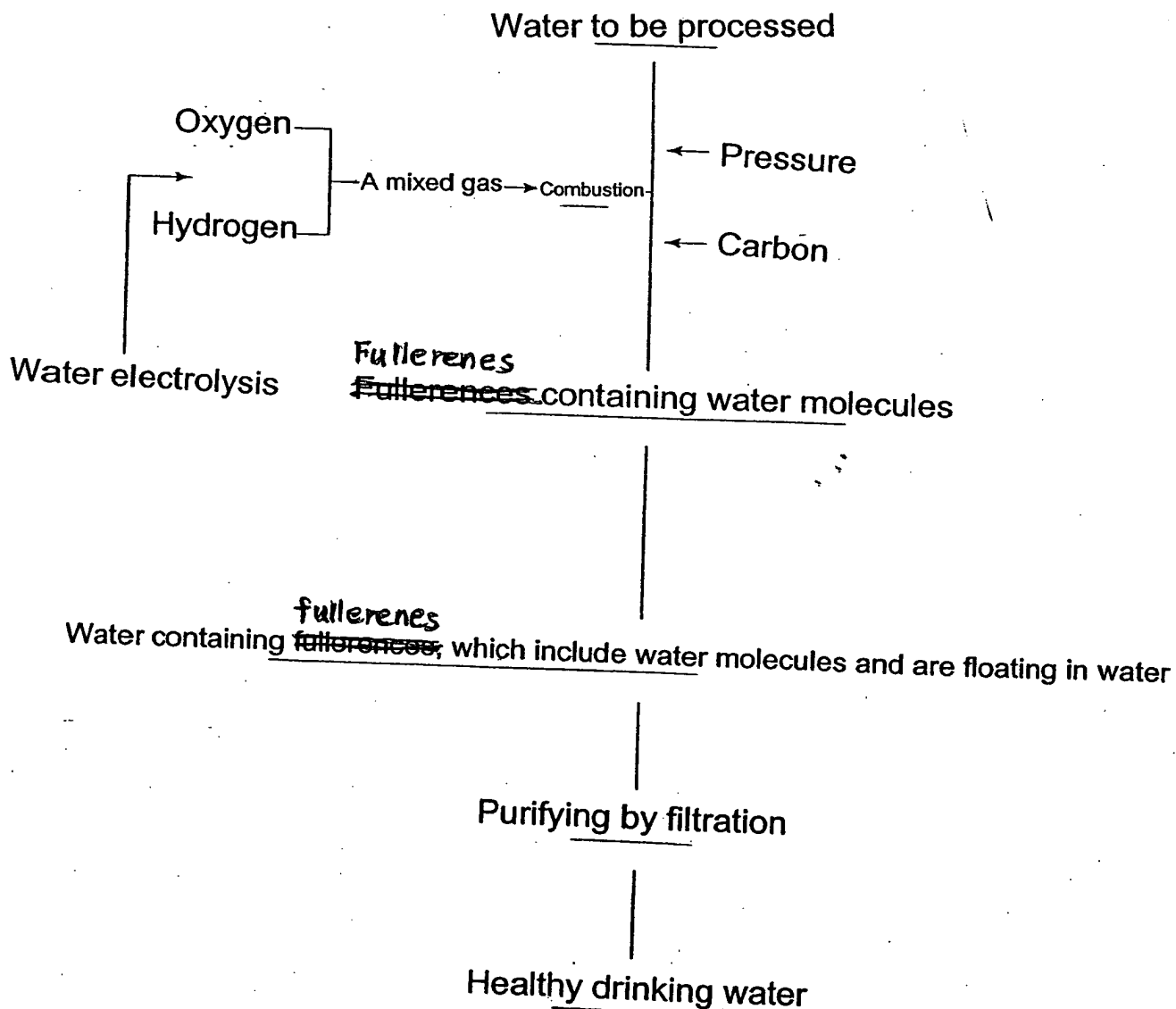
Appl. No.: 09/868,737

Atty Docket: KOD9B.001APC

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FIG. 1

A flow chart of producing water containing ~~fullerenes~~ ^{fullerenes}



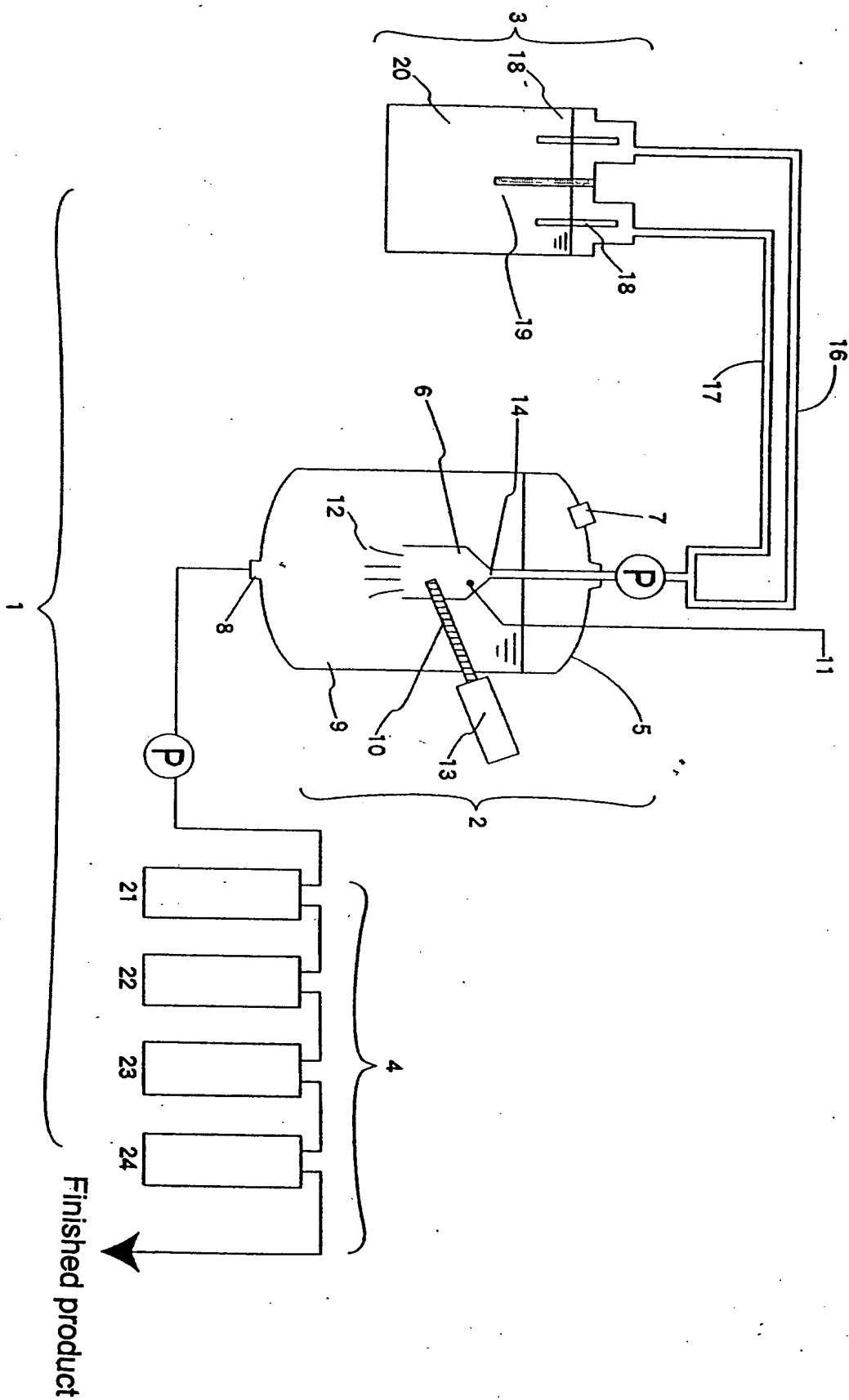


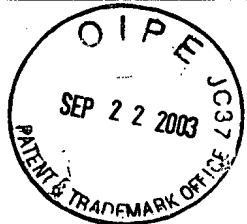
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Appl. No.: 09/868,737 Atty Docket: KOD9B.001APC

FIG. 2





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Appl. No.: 09/868,737 Atty Docket: KOD9B.001APC

FIG. 3

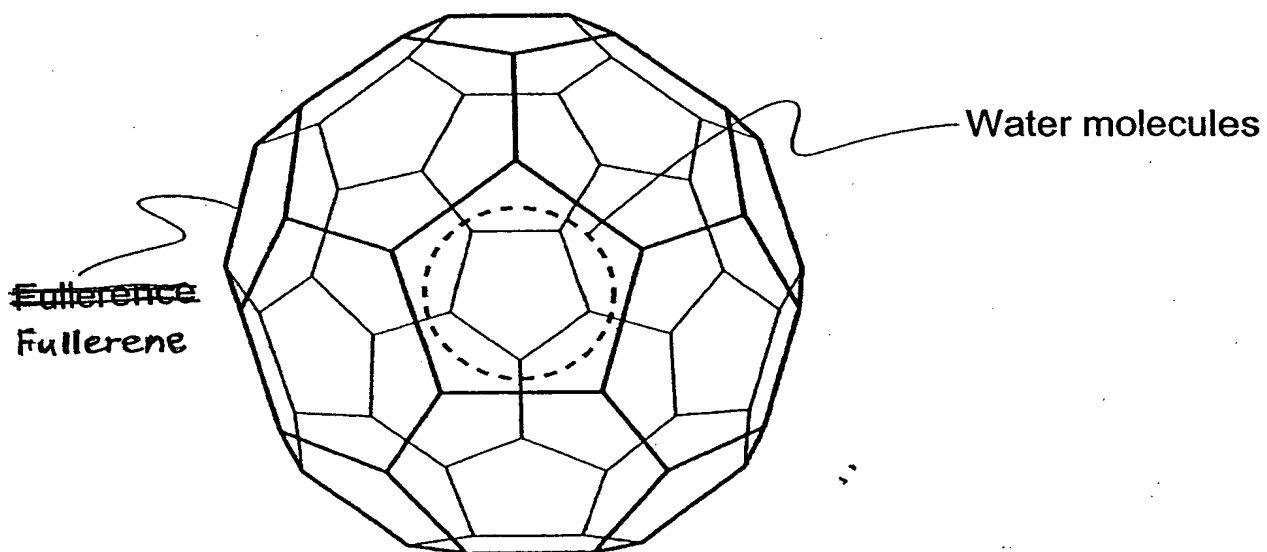


FIG. 4

Various Properties of C_{60} (prepared based on a table from Chemistry, 46, 830, 1990)

Properties (Physical Quantity)	Measured Value, etc.	Properties (Physical Quantity)	Measured Value, etc.
·Molecular weight:	720.66	·Electron affinity:	2.65±0.02 eV
·No. of molecules:	720	·Reduction potential ($E^{1/2}$ vs Fc/Fc^+), acetonitrile/toluene, (E_4^4N)	-0.98, -1.37, -1.87, -2.35, -2.85, -3.26 (V)
·Molecular structure:	Frustum icosahedron (1_n), Diameter: ~7.1 Å C-C bond shared by two six-membered rings 1.391 Å C-C bond forming a five-membered ring 1.455 Å $\delta = 143.27$ ppm	·Crystal structure:	Simple cubic system (249K or less) $Pd3$, $Z=4$, $a=14.041\text{Å}$ (5K) Face-centered cubic system (249K or more) $Fm3$, $Z=4$, $a=14.17\pm0.01\text{Å}$ (300K) Distance between the center of adjacent molecules: ~10.0 Å
· ^{13}C -NMR spectrum (C_4D_6)	527.4, 576.4, 1182.4, 1428.5	·Density:	1.729 g/cm ³ (5K, calculated value) 1.682 g/cm ³ (300K, calculated value)
·Infrared adsorption spectrum (KBr pellet)/cm ⁻¹	527.1, 570.3, 1169.1, 1406.9	·Compressibility (0~20GPa):	(5.5±0.5)×10 ⁻² GPa ⁻¹
·Infrared emission spectrum (vapor-phase, 850±100°C)/cm ⁻¹	273(s), 437(m), 496(s), 710(m), 774(m), 1099(w), 1250(w), 1428(m), 1470(vs), 1575(m)	·Melting point:	>700°C
·Raman spectrum (thin film)/cm ⁻¹	273(s), 437(m), 496(s), 710(m), 774(m), 1099(w), 1250(w), 1428(m), 1470(vs), 1575(m)	·Heat of transition (249K):	~4.83 kJ/mol
·Visible ultraviolet spectrum (hexane solution, log ϵ in parentheses)/nm:	211(5.11), 227(sh, 4.91), 256(5.24), 328(4.71), 390(3.52), 403(3.48), 492(sh, 2.72), 540(2.85), 568(2.78), 590(2.86), 598(2.87), 620(2.60)	·Heat of sublimation:	9.58±0.31 kJ/mol
·Fluorescence spectrum (toluene solution, at room temp.)/nm	No observation	·Conductivity (at room temp.):	<10 ⁻⁹ S/cm ⁻¹
·Triplet energy (toluene solution)	1.56±0.03 eV (8.60±0.14 kJ/mol)	·Molar magnetic susceptibility —(260±20)×10 ⁻⁶ emu/mol	K_3C_{60} (18), Rb_3C_{60} (28,30), Rb_2CsC_{60} (31), $RbCs_2C_{60}$ (33), K_2CsC_{60} (24), Na_2CsC_{60} (12), Na_2RbC_{60} (s.5), Na_3KC_{60} (2.5), Li_2CsC_{60} (12), Ca_4C_{60} (8.4), Sn_2C_{60} (12)
·Ionization potential	7.61±0.02 eV	·Transition temp. of superconducting salt T _c /K:	
		·Curie temp. of ferromagnetic salt:	TDAE _{0.55} C ₆₀ . 16.1K

* Curie temperature: Temperature at which a paramagnetic substance changes to a ferromagnetic substance when it is cooling down.
TDAE indicates tetrakis(dimethylamino)ethylene.

(Source: K. Tanigaki & others, ~~Fullerene~~, Sangyo-tosho, Oct. 27, 1992, P.16)

Fullerene



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